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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF:

:

MARIO P. MORETTI

: GROUP ART UNIT: 3728

SERIAL NO: 09/765,605

:

FILED: JANUARY 22, 2001

: EXAMINER: STASHICK, A.

FOR: WATERPROOFED VAPOR-  
PERMEABLE SOLE FOR SHOESRENEWED APPEAL BRIEF UNDER 37 C.F.R. § 1.192ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

In response to the Final Office Action dated April 9, 2002, Appellant herein appeals  
the final rejection.

I. REAL PARTY IN INTEREST

The real party in interest is GEOX S.P.A. of Frazione, Italy.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-8 are active and are finally rejected.

IV. STATUS OF AMENDMENTS

All amendments have been entered.

#### V. SUMMARY OF THE INVENTION

The invention is directed to a problem which is specific to shoes with leather soles: the leather absorbs moisture and so becomes impregnated with water which can wet the user's foot (page 1, lines 8-12). Thus, the motivation for the present invention stems from the absorption of water by leather, as opposed to waterproof elastomeric sole materials.

In accordance with the invention, the *leather* tread of the shoe is therefore covered in an upward region by a membrane made of a material which is permeable to vapor but impermeable to water, and which is sealed in the peripheral regions thereof with respect to the tread. Referring to the non-limiting example of the figures, the leather tread 11 is thus covered by the air permeable but water impermeable membrane 12 which is sealed by the peripheral trim 13 about its periphery. Water vapor can thus pass outward from the foot through the membrane 12, but water absorbed in the leather tread 11 is not allowed to penetrate the membrane 12 and wet the foot.

Moreover, in order to better remove the water vapor which has passed through the membrane 12, through holes extending entirely through the thickness of the tread include inserts 15 made of a plastic material ("plastic" here being used to refer to any rubber-like elastomer) assembled in the through holes, the inserts themselves having through holes 16 to allow passage of the vapor. The inserts will simultaneously provide anti-slip characteristics to the sole (page 4, lines 24-28).

## VI. ISSUES

The sole issue to be considered in this appeal is whether Claims 1 and 3-8 are obvious over a combination of four separate references: U.S. Patent 4,100,685 to Dassler in view of U.S. Patent 4,771,555 to Ohashi, as well as U.S. Patent 5,983,524 to Polegato and U.S. Patent 6,282,813 to Squadroni.

## VII. GROUPING OF CLAIMS

Claims 1 and 3-8 all stand or fall together. Claim 2 stands or falls alone.

## VIII. ARGUMENT

Claims 1 and 3-8 stand rejected under 35 U.S.C. § 103 as being obvious over Dassler in view of Ohashi, Polegato and Squadroni. The Examiner there recognized that the primary reference to Dassler "does not teach the tread being made of leather," does not teach the tread being "at least partially covered in an upward region by a membrane that is permeable to vapor and impermeable to water," does not teach a tread at least partially covered in an upward region by a membrane that is "sealed in the peripheral regions with respect to the tread," does not teach "details with respect to the membrane," does not teach "a protective layer used to protect the membrane, the undercuts in the inserts; and the inserts assembled by injection molding." Indeed, Dassler teaches nothing more than venting channels 8 extending entirely through the plastic sole of a sport shoe (col. 1, lines 44-49) in order to vent perspiration developed during intense periods of activity (see paragraph bridging cols. 1-2). The venting channels 8 have filter inserts 9 to prevent the penetration of dirt into the interior of the shoe without detracting from the desired ventilation (col. 3, lines 43-48), which the examiner considers to be the claimed inserts.

The Examiner has relied upon Ohashi to teach "that inserts used to ventilate a shoe can be made of plastic." Moreover, the Examiner has relied upon Squadroni to suggest forming the elastomeric sole of Dassler from leather, and has relied upon Polegato to teach covering an upward region of the shoe sole by a material which is permeable to vapor and impermeable to water. However, Applicants respectfully submit that the purported motivations fail to adequately support the obviousness of the multiple modifications of the prior art which are necessary to provide the claimed invention.

As is noted above, the invention is directed to a problem which is specific to shoes with leather soles: the leather absorbs moisture and so becomes impregnated with water which can wet the user's foot. Thus, the motivation for the present invention stems from the absorption of water by leather. In accordance with the invention, the *leather* tread of the shoe is therefore covered in an upward region by a membrane made of a material which is permeable to vapor but impermeable to water, and which is sealed in the peripheral regions thereof with respect to the tread. Moreover, the through holes better remove the water vapor which has passed through the membrane, and inserts simultaneously provide anti-slip characteristics to the sole.

As an initial matter, Applicant notes that the outer layer of the sole in Dassler is formed from a molded part 5 made of plastic such as polyurethane. Thus, the sole in Dassler is not formed of leather or a similar material which absorbs moisture and requires an additional water barrier. The sole 5 is itself a water barrier, and so the water impregnation problem noted above would not arise therein. Thus, those skilled in the art would not have been motivated to add a water impermeable layer onto the sole 5 of Dassler, both because the sole 5 is already water impermeable, and also because this would interfere with the desired air ventilation in Dassler, even if the material of the water impermeable layer

were nominally air permeable (even an air permeable, water impermeable layer will provide a considerable resistance to air circulation as compared to unrestricted through holes).

It is true that Dassler provides the through holes 8 with "inserts" 9. However, the "inserts" 9 of Dassler are merely filter inserts which prevent the penetration of dirt particles into the shoe. They would not be required if the penetration of dirt particles into the shoe was already prevented by the presence of a membrane!

As the Examiner has noted, Squadroni discloses that shoe soles having air vent holes could be formed of leather as well as rubber. But this begs the question of whether it would have been obvious for those skilled in the art to have formed the sole 5 of Dassler from leather. While Squadroni discloses that the ventilated sole thereof *could* be made of leather, it also discloses that it is "most preferably" formed of rubber (column 2, lines 66-67). **Thus, the teaching which Squadroni provides to those skilled in the art is that soles requiring ventilation are preferably formed of rubber. This would certainly not provide a motivation for those skilled in the art to modify a rubber sole to be leather.**

Squadroni also teaches that "using membranes made of special material" is to be avoided" (col. 1, lines 45-49). This further suggests against the obviousness of the combination of modifications of Dassler proposed in the final Office Action.

Nor can the suggestion for forming the sole of a ventilated shoe having a gas permeable layer from leather be drawn from Polegato, since the tread layer 13 of Polegato is made of an elastomer. Finally, Appellant recognizes that Ohashi teaches plastic inserts, but only in a ski boot having a hard plastic shell. There is no reason why those skilled in the art would have been motivated by the presence of plastic inserts in a plastic shell to include plastic inserts for the ventilation holes of a leather sole.

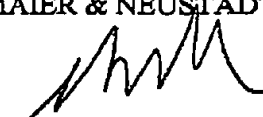
In summary, Appellant respectfully submits that it would not have been obvious for those skilled in the art to have combined the four references applied in the rejection in the manner set forth, while utilizing a leather sole. The problem to be solved by the invention is one which is characteristic of leather soles and is not fairly taught by any of the references. Indeed, the only mention of leather in the cited references is found in Squadroni, and Squadroni teaches those skilled in the art that leather is a *less desirable* material than is rubber. It is therefore evident that any motivation for the combination of references set forth in the outstanding rejection comes from hindsight, and not from the fair reading of what would have been obvious to those skilled in the art at the time of invention.

Claim 2 further recites that the inserts form antislip and wear-preventing protrusions underneath said tread. This is particularly desirable in shoes having leather soles which may not otherwise have good anti-slip or wear characteristics. The filter inserts 9 of Dassler do not extend to a position underneath the *rubber* tread thereof, and so cannot form such protrusions. Since the final Office Action does not allege that Dassler or any of the other references teach or suggest this feature, Claim 2 defines over the applied art.

Appellant therefore respectfully submits that all of the claims are patentable, and so requests that the final rejection be REVERSED.

Respectfully submitted,

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APPENDIX

1. A waterproofed and vapor-permeable sole for shoes, comprising:  
a tread made of leather and is at least partially covered in an upward region by a membrane made of a material which is permeable to vapor, which is impermeable to water, and is sealed in peripheral regions thereof with respect to said tread;  
through holes extending entirely through a thickness of said tread;  
inserts made of plastic material, assembled in said through holes, said inserts in turn having through holes therethrough for allowing vapor to pass through said through holes through the thickness of said tread.
2. The sole according to claim 1, wherein said inserts form antislip and wear-preventing protrusions underneath said tread.
3. The sole according to claim 1, wherein said membrane is peripherally spaced from the edge of said tread and further comprising a peripheral upper trim, which is made of rubber, and which is assembled to said tread so as to cover and seal peripheral regions of said membrane and so as to leave a wide central opening through which said membrane is visible.
4. The sole according to claim 1, wherein the dimensions of said membrane are equal to those of the tread and wherein the edge of the membrane is sealed to the tread along all the perimeter of the membrane by means of adhesive.
5. The sole according to claim 1, wherein at least one protective layer is arranged at least at upper outlets of said holes of said inserts assembled in said tread so as to protect said membrane.
6. The sole according to claim 1, wherein said inserts form, in said tread, undercuts which prevent disassembly of the inserts from said tread.



7. The sole according to claim 1, wherein a vapor-permeable and/or perforated protective layer is arranged above said membrane.

8. The sole according to claim 1, wherein said inserts are assembled to said tread by injection-molding.